

Appl. No. 10/762,788

Reply to Examiner's Action dated January 22, 2004

REMARKS/ARGUMENTS

The Applicants have carefully considered this application in connection with the Examiner's Action and respectfully request reconsideration of this application in view of the foregoing amendment and the following remarks.

The Applicants originally submitted Claims 1-40 in the application. In previous responses, the Applicants cancelled Claims 1-22, 25 and 33-40. Presently, Claim 23 has been amended, and Claims 41-46 have been added. It should be noted that support for the amendment and new claims is found in U.S. Patent No. 6,551,946B1, which was originally incorporated by reference into the instant application. No other claims have been amended, added or canceled. Accordingly, Claims 23-24, 26-32 and 41-46 are currently pending in the application.

I. Rejection of Claims 23 and 25 under 35 U.S.C. §102

The Examiner has rejected Claims 23 and 25 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,845,047 to Holloway, *et al.* ("Holloway"). Independent Claim 23 has currently been amended to include the claimed element that the oxide is formed by:

a) exposing the substrate to a first oxidizing ambient, wherein exposing the substrate to a first oxidizing ambient includes increasing from an initial temperature to a first temperature below a threshold temperature at a first ramp rate, increasing from the first temperature to a second temperature below the threshold temperature at a second ramp rate, and growing at least a portion of the oxide;

(b) exposing the substrate to a second oxidizing ambient, wherein exposing the substrate to a second oxidizing ambient includes increasing from the second temperature to a third temperature at a third ramp rate, and increasing from the third temperature to a temperature above the threshold temperature at a fourth ramp rate; and

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(c) cooling the substrate to a temperature below the threshold temperature, wherein the oxide and the substrate form an interface that is substantially stress free and planar.

Holloway, in contrast to the present invention, is directed to a threshold adjustment method for an IGFET. (Title). Holloway teaches that a threshold adjustment implant may be implanted through a gate insulator layer and a gate electrode layer to adjust the threshold of the device. As Holloway is directed mainly to the threshold adjustment, and not the formation of the oxide, it fails to disclose the aforementioned process for forming the oxide that results in a stress free planar interface between the gate oxide and the substrate. Accordingly, Holloway fails to disclose this claimed element.

Therefore, Holloway does not disclose each and every element of the claimed invention and as such, is not an anticipating reference. Accordingly, the Applicants respectfully request the Examiner to withdraw the §102 rejection with respect to these Claims.

II. Rejection of Claims 24 and 26-32 under 35 U.S.C. §103

The Examiner has rejected Claims 24 and 26-32 under 35 U.S.C. §103(a) as being unpatentable over Holloway in view of U.S. Patent No. 6,288,425 to Adan ("Adan") and U.S. Patent No. 6,815,295 to Ueno, *et al.* ("Ueno"). As previously indicated, independent Claim 23 has currently been amended to include the process for forming the oxide layer that results in the stress free planar interface between the gate oxide and the substrate. As also previously indicated, Holloway fails to disclose this newly claimed element. Holloway similarly fails to suggest this claimed element.

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Moreover, both Adan and Ueno fail to correct the deficiency of Holloway, as both Adan and Ueno fail to teach or suggest this claimed element.

Thus, Holloway, individually or in combination with Adan and/or Ueno, fails to teach or suggest the invention recited in independent Claim 23 and its dependent claims, when considered as a whole. Therefore, the combination fails to establish a prima facie case of obviousness with respect to these claims. Claims 24 and 26-32 are therefore not obvious in view of Holloway, Adan and Ueno.

In view of the foregoing remarks, the cited references do not support the Examiner's rejection of Claims 24 and 26-32 under 35 U.S.C. §103(a). The Applicants therefore respectfully request the Examiner withdraw the rejection.

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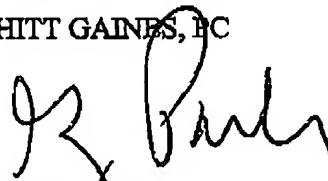
III. Conclusion

In view of the foregoing amendment and remarks, the Applicants now see all of the Claims currently pending in this application to be in condition for allowance and therefore earnestly solicit a Notice of Allowance for Claims 23-24, 26-32 and 41-46.

The Applicants request the Examiner to telephone the undersigned attorney of record at (972) 480-8800 if such would further or expedite the prosecution of the present application. The Commissioner is hereby authorized to charge any fees, credits or overpayments to Deposit Account 08-2395.

Respectfully submitted,

HITT GAINES, PC



Greg H. Parker
Registration No. 44,995

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P.O. Box 832570
Richardson, Texas 75083
(972) 480-8800